

INTERNATIONAL MASTERCLASSES

on the UN International Day of Women and Girls in Science



International Masterclasses¹ are a successful tool to engage high-school students with particle physics. Young people become scientists for one day and perform a tailor-made physics analysis involving real LHC data under the supervision of physicists. In this way students experience methods and tools used in research and an appreciation for fundamental science is created.

Masterclass activities for girls² were launched by IPPOG for the first time on February 11, 2017, the *UN International Day of Women and Girls in Science*.

- Participation numbers:
- 10 universities and research labs
 - 320 girls
 - 3 videoconferences with CERN

International Day of Women and Girls in Science³
11 February

- Goal: Promote gender equality in science
- support access of females to science education and research
 - awareness-raising events encouraged by UN

Concept of International Masterclasses⁴

- High school students (15 – 19) are invited to a university or research lab as „scientists for one day“
- Introductory talks (standard model, detectors, accelerators)
- Hands-on: measurement with LHC data (ATLAS, CMS, ALICE, LHCb)
- International video conference (3 – 5 groups + CERN/ Fermilab)
- Organized by IPPOG⁵

Fri, 10.2., VC1	Fri, 10.2., VC2	Sat, 11.2., VC1
Paris, APC + U.Diderot	Madrid, CIEMAT	Rio de Janeiro
Cosenza	Rio de Janeiro	Heidelberg
Prague, CTU	Cagliari	São Paulo
Barcelona, IFAE		

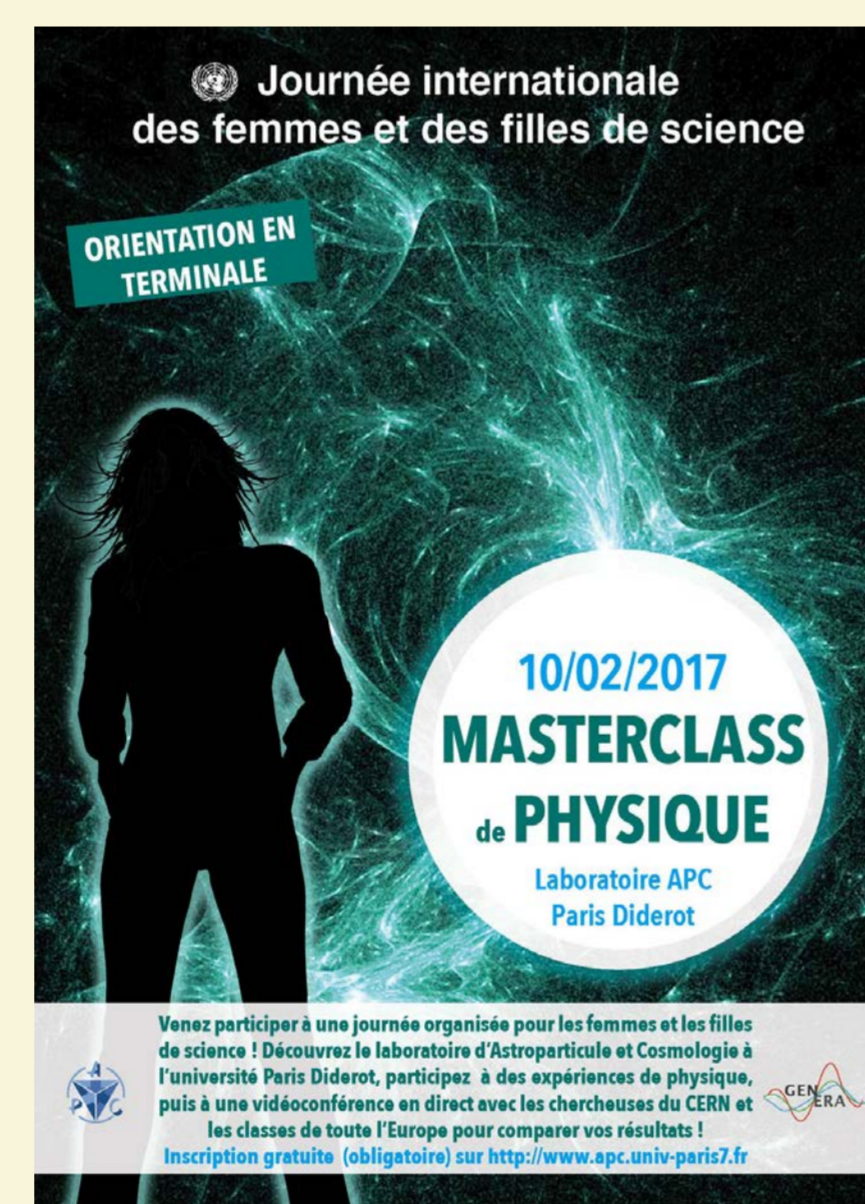
- ATLAS W
- ATLAS Z
- LHCb
- CMS

Moderators:



Paris, APC + Univ. Diderot

- 2 extra talks by female researchers about their professional path
- joined lunch for informal discussion



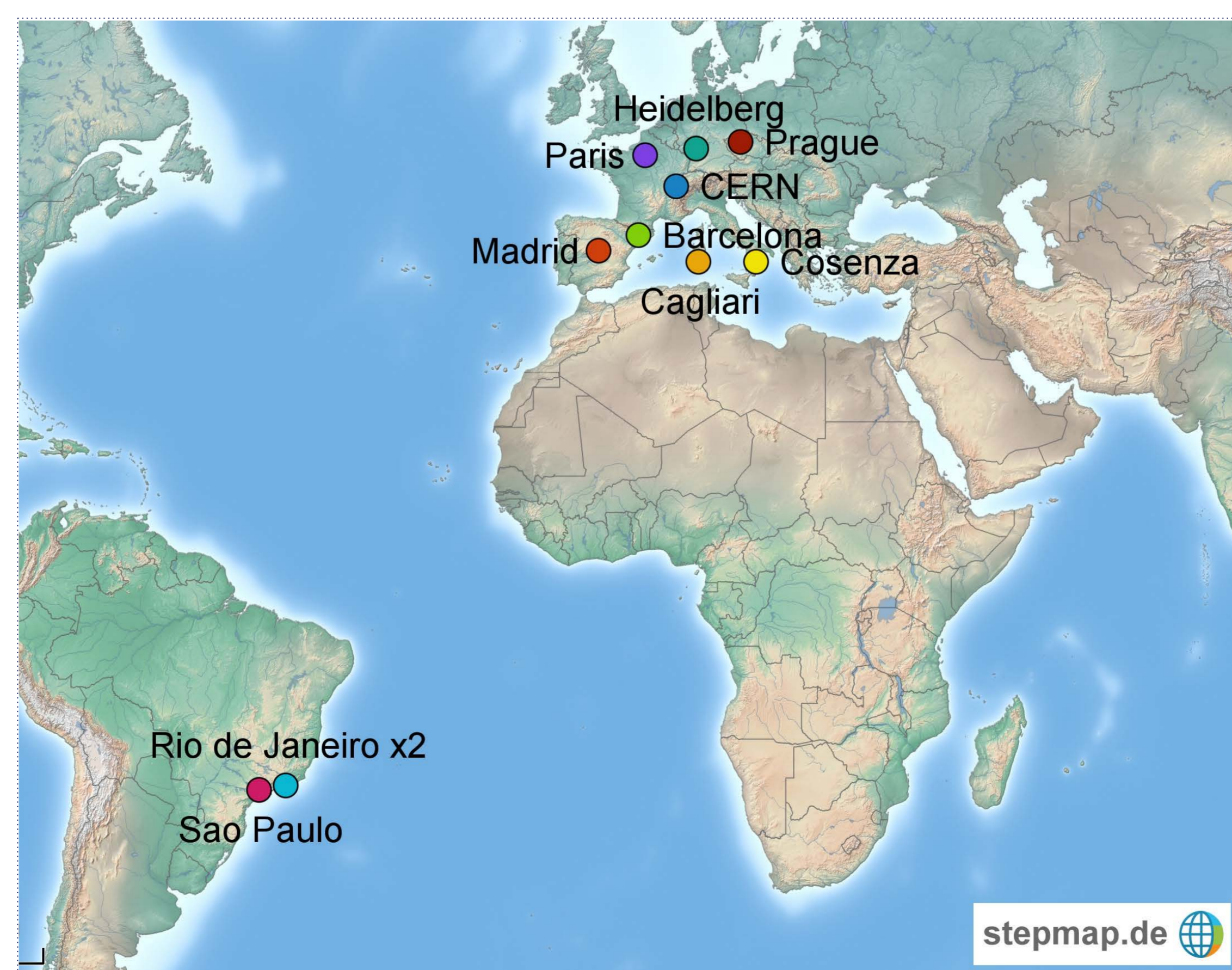
Prague, Czech Technical University

- great media coverage
- 2 newspapers and Czech public television



Barcelona, IFAE

- Friday: Masterclass and visit of tier-1 data center PIC
- Saturday: Astroparticle Masterclass (Gamma Ray Hunters)



Cosenza, Università della Calabria & INFN

- extra talk: Le donne nella ricerca
- Council of Physics acknowledged February 11 as special day of the Physics Department dedicated to girls

1: <http://physicsmasterclasses.org>
 2: http://physicsmasterclasses.org/index.php?cat=women_in_science
 3: <http://www.un.org/en/events/women-and-girls-in-science-day/>
 4: <http://cerncourier.com/cws/article/cern/57305>
 5: <http://ippog.org>